PHOTOGRAPHIC INTERPRETATION REPORT

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FIRE-CONTROL RADAR MOUNTED ON ZSU-23/4 SELF-PROPELLED ANTIAIRCRAFT GUN 7 NOVEMBER 1965 AND 1 MAY 1966 MOSKVA PARADES

NPIC/R-33/67
MARCH 1967

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PREFACE

This report has been prepared in response to DIA requirement DIA-11-66 (ST-2) and provides mensuration details on the fire-control radar mounted on a ZSU-23/4 which was observed in both the 7 November 1965 and 1 May 1966 Moskva Parades.

[redacted]

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[redacted]

FIRE-CONTROL RADAR MOUNTED ON ZSU-23/4 SELF-PROPELLED ANTIAIRCRAFT GUN, 7 NOVEMBER 1965 AND 1 MAY 1966 MOSKVA PARADES

DESCRIPTION

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A fire-control radar mounted on a ZSU-23/4 vehicle was observed on [redacted] photography taken during the 7 November 1965 and the 1 May 1966 Moskva Parades. In addition to the side and rear elevations of the radar set shown in Figures 1 through 6, the elevation axis stop limits have been determined and are presented below.

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The radar reflector and the elevation drive mechanism are mounted on 4 hydraulic shock absorbers (cylinders) which are fixed to a base plate [redacted] The manner in which the hydraulic shocks (cylinders) converge to their mounting on this base plate seems to indicate that the radar set has an azimuthal rotation capability. Based on the radar's position shown in Figure 6, this is in fact true and the base plate is actually the housing for a roller track bearing and azimuth drive motor-type assembly. The entire radar assembly can be folded down when not in use.

The coaxial cable is looped behind the reflector with sufficient slack to permit the antenna to move in the vertical plane (elevation).

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The vertical plane movement is limited by the fixed stop plate which is fixed at [redacted] degrees above the horizontal axis of the vehicle and by 2 offset radial cuts on the elevation axis shaft housing (Figure 1) as making a 30 degree angle at the front and a 30 degree angle at the rear of the fixed stop plate. These radial cuts or rotating stop plates allow a 60 degree vertical movement. However, the forward rotating stop plate is elevated 16 degrees above the boresight, thus allowing the boresight to be lowered to a position approximately [redacted] degrees below the horizontal. This results in an approximate maximum boresight elevation limit of [redacted] degrees above the horizontal.

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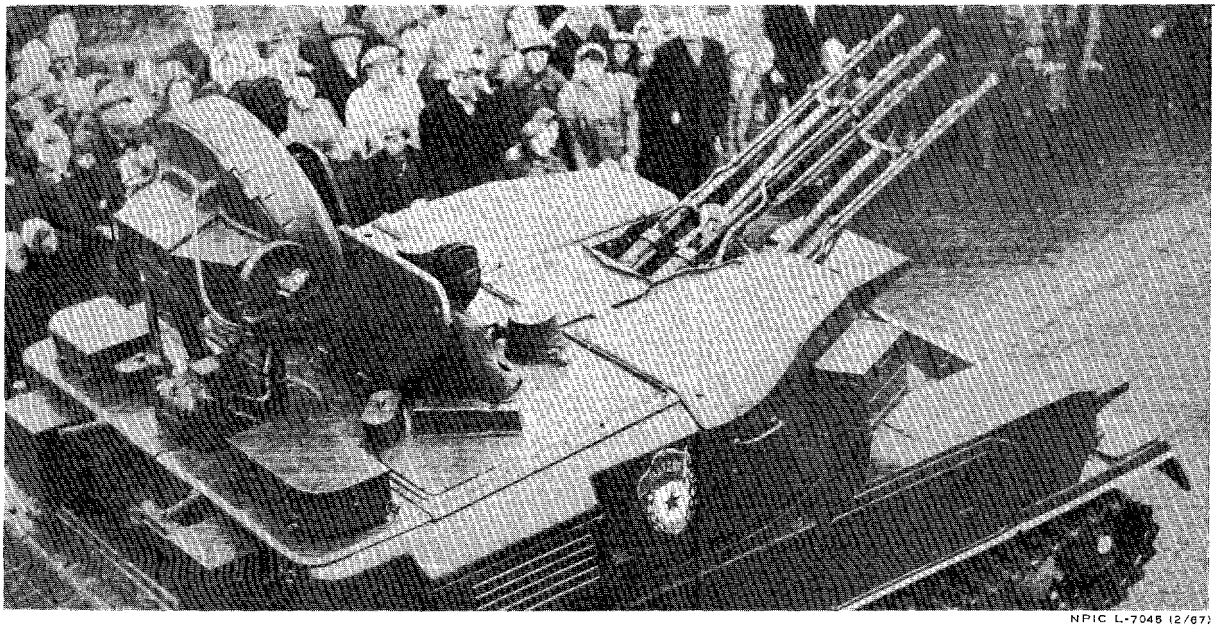

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FIGURE 1. THREE-QUARTER TOP VIEW OF THE FIRE-CONTROL RADAR MOUNTED ON ZSU-23/4 SELF-PROPELLED ANTIAIRCRAFT GUN, 1 MAY 1966.

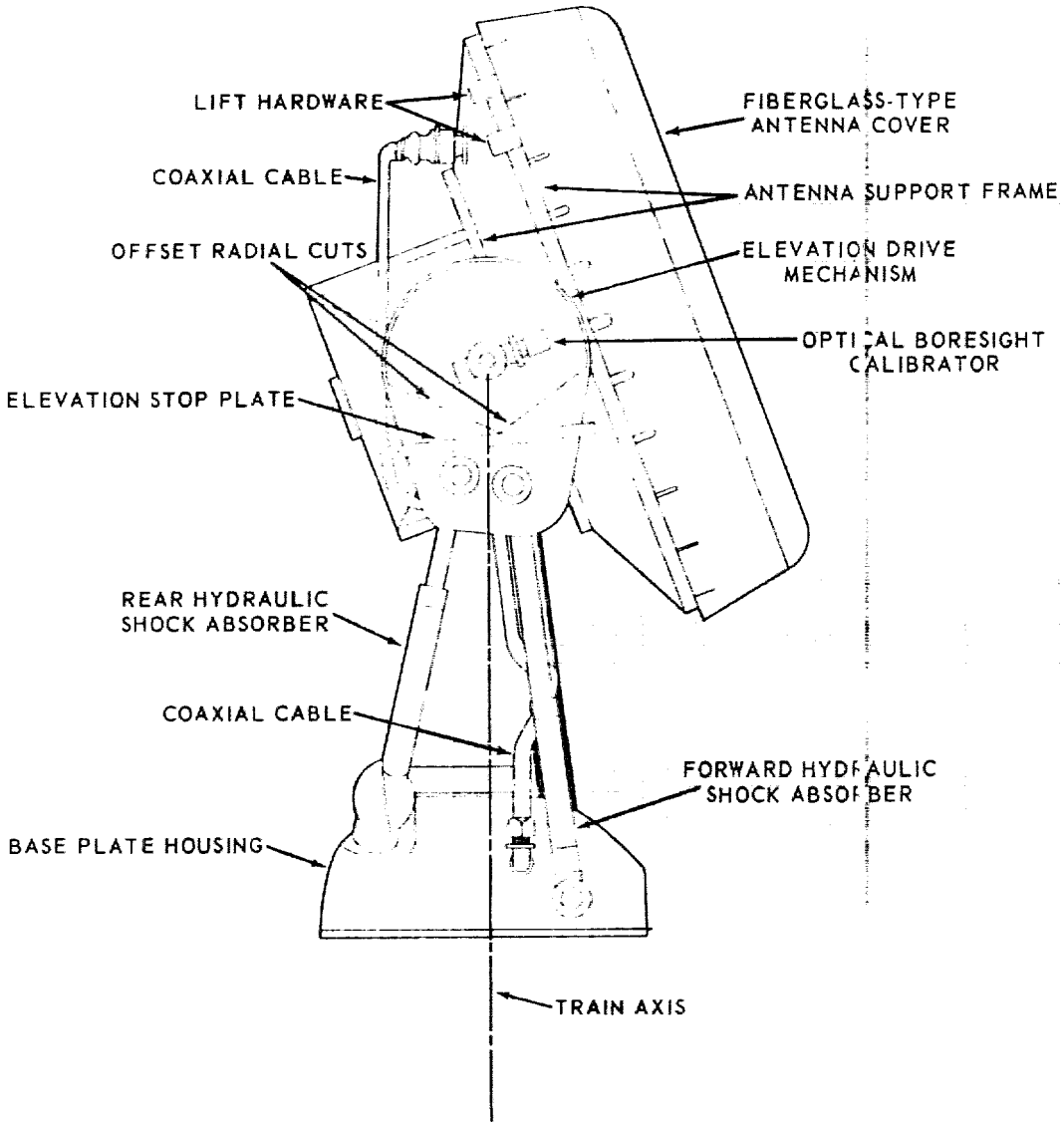

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FIGURE 2. RIGHT SIDE OF THE FIRE-CONTROL RADAR.

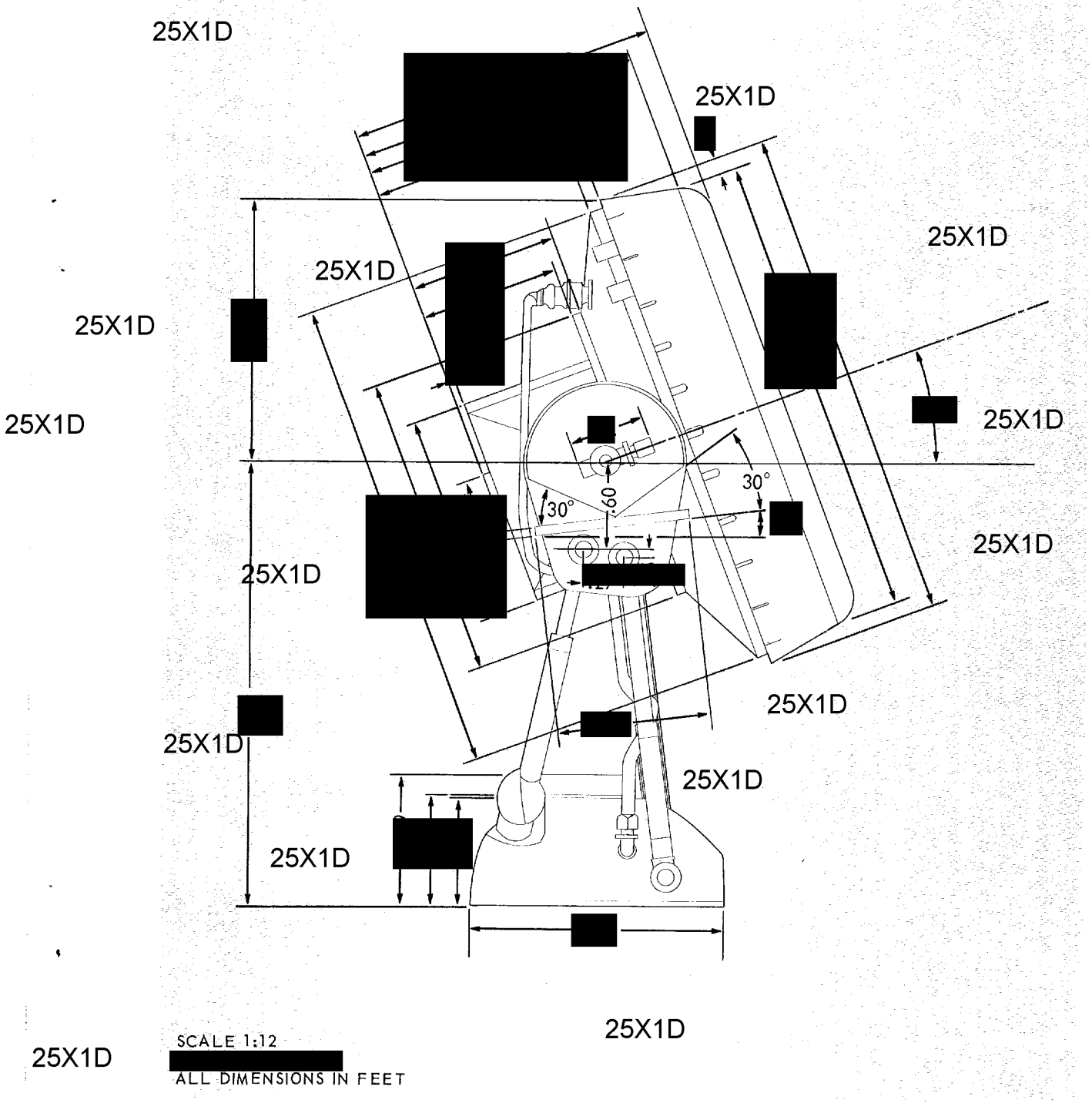
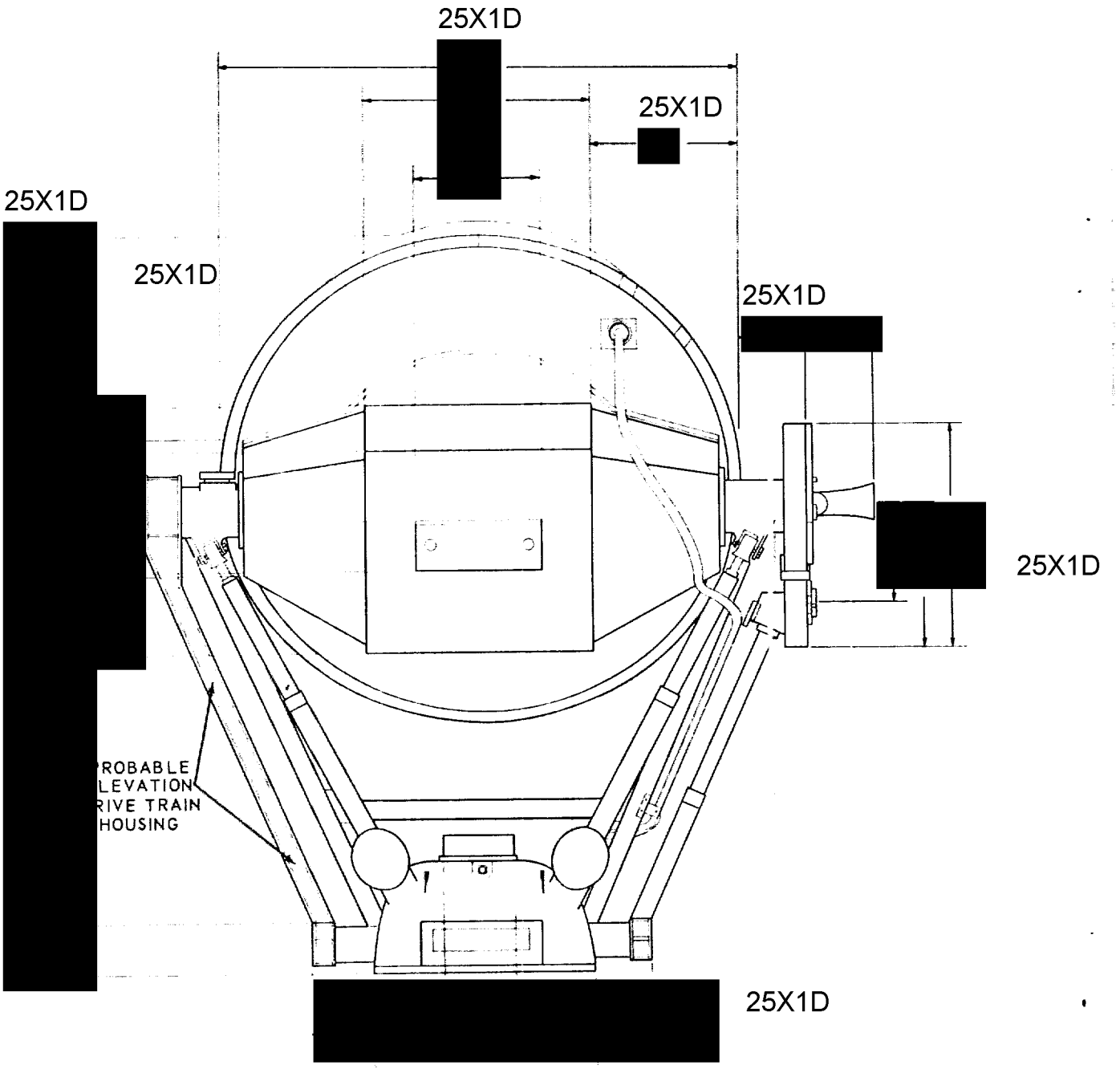


FIGURE 3. DIMENSIONAL DRAWING OF THE RIGHT SIDE OF THE FIRE-CONTROL RADAR.



SCALE 1:12
ALL DIMENSIONS IN FEET

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FIGURE 4. DIMENSIONAL DRAWING OF THE BACK OF THE FIRE-CONTROL RADAR.

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FIGURE 5. RIGHT SIDE OF THE FIRE-CONTROL RADAR MOUNTED ON ZSU-23/4 SELF-PROPELLED ANTIAIRCRAFT GUN, 7 NOVEMBER 1966.

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FIGURE 6. QUARTER RIGHT VIEW OF RIGHT SIDES OF 2 FIRE-CONTROL RADARS MOUNTED ON ZSU-23 4 SELF-PROPELLED ANTIAIRCRAFT GUN, 1 MAY 1966.

REFERENCES

PHOTOGRAPHY

25X1D

[redacted]

DOCUMENT 25X1D

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1. DOD. [redacted] *Soviet ZSU-23/4 Self-Propelled Antiaircraft Gun*, 31 Mar 66 (CONFIDENTIAL/No Foreign [redacted]

RELATED DOCUMENT

DPIC (RCAF). 53.02.10/133, *ZSU-23 (?)/4 (USSR)*, 15 Dec 65 (SECRET)

REQUIREMENT

DIA-11-66 (ST-2)

NPIC PROJECT

11516/66